

WHAT IS CLAIMED IS:

1 1. A magnetic recording head, comprising:
2 a magnetoresistive layer having a first end and a second end;
3 a soft-adjacent magnetic transverse bias layer (SAL) having a first end and a
4 second end;
5 an insulating layer arranged between said magnetoresistive layer and said SAL;
6 a first conductive layer electrically contacting said first end of said
7 magnetoresistive layer and said first end of said SAL;
8 a second conductive layer electrically contacting said second end of said
9 magnetoresistive layer and said second end of said SAL;
10 the magnetoresistive layer supporting a first current path between the first and
11 second conductive layers; and
12 the SAL supporting a second current path between the first and second conductive
13 layers;
14 wherein the second current path is substantially longer than the first current path.

1 2. The magnetic recording head of claim 1, wherein said first current path passes
2 through an active region in said magnetoresistive layer.

1 3. The magnetic recording head of claim 2, wherein said first conducting layer
2 includes an extending portion on a top surface of said magnetoresistive layer, and said second
3 conducting layer includes an extending portion on said top surface of said magnetoresistive
4 layer, said active region being formed between said first conducting layer extending portion, said
5 magnetoresistive layer, and said second conducting layer extending portion.

1 4. The magnetic recording head of claim 1, wherein thickness of said
2 magnetoresistive layer is more than 50 Å and less than 400 Å.

1 5. The magnetic recording head of claim 1, wherein thickness of said SAL is less
2 than 500 Å, and the moment ratio of said SAL to said magnetoresistive layer ranges from 0.6 to
3 1.0.

1 6. The magnetic recording head of claim 1, wherein said first conductive layer
2 comprises a longitudinal bias layer and a lead layer.

1 7. The magnetic recording head of claim 1, wherein said second conductive layer
2 comprises a longitudinal bias layer and a lead layer.

1 8. The magnetic recording head of claim 1, wherein said insulating layer ranges
2 from 50 Å to 200 Å in thickness.

1 9. The magnetic recording head of claim 8, wherein said insulating layer is formed
2 of Al₂O₃.

1 10. The magnetic recording head of claim 1, wherein said SAL comprises a
2 magnetically soft film layer pinned by antiferromagnetic films.